

CLAIMS

What is claimed is:

- 5 1. A clamp for a hose, the clamp including a loop for disposing around the hose and having first and second axially spaced apart looped ends, the clamp comprising:
 - a force generator, for drawing together the first and second looped ends, and connected to the first and second looped ends, the force generator
10 including at least one disc spring mounted thereon; and
 - a spacer member mounted on the force generator between the disc spring and the first looped end for axially transferring a clamping force from the force generator to the first and second looped ends, the clamping force being sufficient to axially draw together the first and
15 second looped ends so as to clamp the hose.
2. The clamp, according to claim 1, in which the first looped end includes a first outer face and a first inner face, and the second looped end includes a second outer face and a second inner face, the first and second outer faces
20 being angled inwardly towards each other and the first and second inner faces being curved and disposed inwardly towards each other.
3. The clamp, according to claim 2, in which the first looped end includes first and second holes located in the respective first outer and inner faces and
25 the second looped end includes third and fourth holes located in the respective second outer and inner faces, the holes being axially aligned with each other.
4. The clamp, according to claim 3, in which the force generator includes a bolt having a first bolt end and a second bolt end, the bolt passing through the
30 first, second, third and fourth holes.

5. The clamp, according to claim 4, in which the bolt includes a threaded portion and a non-threaded portion, the non-threaded portion extending through and away from the first looped end.
- 5 6. The clamp, according to claim 5, in which the disc spring and the spacer member are slidably mounted on the non-threaded portion, the disc spring being located near the first bolt end.
7. The clamp, according to claim 6, in which the force generator further
10 includes a first capture nut mounted in the first looped end and a second capture nut mounted in the second looped end.
8. The clamp, according to claim 7, in which the first capture nut includes a non-threaded axial bore.
- 15 9. The clamp, according to claim 8, in which the second capture nut includes a threaded axial bore.
10. The clamp, according to claim 9, in which the first and second capture
20 nuts each includes a curved end and a stem portion.
11. The clamp, according to claim 10, in which the spacer member includes a cylindrical collar with an axial bore sized to accommodate the bolt therein, the cylindrical collar having a force receiver end and a force transfer end.
- 25 12. The clamp, according to claim 11, in which the stem portion of the first capture nut is disposed towards the first hole of the first looped end and abuts the force transfer end.
- 30 13. The clamp, according to claim 2, in which the second looped end includes one hole that is axially aligned with the first and second holes of the first looped end.

14. The clamp, according to claim 13, in which the force generator is a T-bolt that passes through the first and second holes of the first looped end and through the one hole of the second looped end, the T-bolt having a T-bolt end and a threaded bolt portion on which is movably mounted a nut, the T-bolt end
5 being located in the second looped end.
15. The clamp, according to claim 14, in which the nut includes a smooth outer surface on which are mounted the disc springs and a threaded bore through which the T-bolt passes.
10
16. The clamp, according to claim 12, in which the second bolt end includes a stop.
17. The clamp, according to claim 16, in which the stop is a lock nut, a
15 Stover nut or a nylon insert nut.
18. The clamp, according to claim 17, in which the Stover nut or the nylon insert nut are integral with the stem portion of the second capture nut.
- 20 19. The clamp, according to claim 2, in which the first hole of the first looped end is larger than the second hole of the first looped end.
20. The clamp, according to claim 1, in which the clamp loop, when viewed in cross section, includes a planar portion and two ends that are angled away
25 from the surface of the hose.
21. The clamp, according to claim 1, includes a plurality of paired disc springs.
- 30 22. The clamp, according to claim 1, in which a plate is hingeable connected to the first looped end.
23. The clamp, according to claim 1, in which the hose is a heavy-duty hose.